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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,789	09/23/2003	Yasuhiro Sato	67161-106	9571
7590 11/03/2005			EXAMINER	
McDermott, Will & Emery 600 13th Street, N.W. Washington, DC 20005-3096			WACHSMAN, HAL D	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AKR

**Office Action Summary**

Application No.

10/667,789

Applicant(s)

SATO, YASUHIRO

Examiner

Hal D. Wachsman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 7 is/are rejected.
- 7) ☒ Claim(s) 3 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9-23-03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. The Abstract is objected to because it contains purported merits (i.e. "...even if an underlying layer is displaced...enhance process accuracy..."). Appropriate correction is required.

2. Page 2, line 27, of the specification cites "capable of" which implies that the invention may or may not do what is cited. Appropriate correction is required.

3. Claims 1-7 are objected to under 37 C.F.R. 1.75(a) for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Claim 1, lines 3-4, cite "...a measurement value of registration accuracy after a process in a first step..." however as in the second step is this measurement value of registration accuracy being measured by the registration inspection apparatus too ? This same type of problem also occurs in claim 5, lines 3-4. The examiner asks the applicant to better claim the limitations cited above. While the examiner understands the intentions of the applicant he feels confusion could be drawn from the limitations cited above. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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5. Claims 1, 2 and 5 are rejected under 35 U.S.C. 102(a) as being anticipated by Yoshitake et al. (US 2003/0018406 A1).

As per claim 1, Yoshitake et al. (Abstract, figure 17, page 2 paragraph 0016, page 6 right column, lines 14-21) disclose "a data storage portion storing a measurement value of registration accuracy....and a measurement value of registration accuracy after a process in a second step measured by a registration inspection apparatus". Yoshitake et al. (Abstract, page 2 paragraphs 0016, 0017, page 3 paragraph 0043, page 5 paragraph 0071, page 6, right column, lines 22-30) disclose "an operation portion calculating an amount of correction for said registration inspection apparatus....and the measurement value of registration accuracy after the process in the second step stored by said data storage portion".

As per claim 2, Yoshitake et al. (page 4, paragraphs 0053, 0054) disclose the feature of this claim.

As per claim 5, Yoshitake et al. (Abstract, figure 17, page 2 paragraph 0016, page 6 right column, lines 14-21) disclose "a data storage portion storing a measurement value of registration accuracy....and a measurement value of registration accuracy after a process in a second step measured by a registration inspection apparatus". Yoshitake et al. (Abstract, page 2 paragraphs 0016, 0017, page 3 paragraph 0043, page 5 paragraph 0071, page 6, right column, lines 22-30) disclose "an operation portion calculating an amount of correction for an exposure apparatus....and the measurement value of registration accuracy after the process in the second step stored by said data storage portion".

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshitake et al. (US 2003/0018406 A1) in view of Smith et al. (US 2004/0157142 A1).

As per claims 4 and 7, Smith et al. (see at least abstract) teach the feature of each of these claims. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Smith et al. to the invention of Yoshitake et al. as specified above because as taught by Smith et al. (page 1, paragraph 0005) lithographic processing is increasingly requiring ever tighter layer-to-layer overlay tolerances to meet device performance requirements and overlay registration on critical layers can directly impact device performance, yield and repeatability.

8. Claims 3 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and subject to the appropriate correction of the 37 C.F.R. 1.75(a) objections noted in paragraph 3 above.

9. The following references are cited as being art of general interest: Tinnerino (4,668,982) which disclose a misregistration/distortion correction scheme, Preil

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(6,868,301) which discloses a method for operation of an exposure tool in the fabrication of an IC to control registration, Tomimatu (US 2003/0104292 A1) which discloses registration accuracy measurement, Tomimatu (6,239,858) which discloses a two step exposure method, Ueno (5,731,113) which discloses reducing registration error in the exposure step of a semiconductor device and Maejima (6,479,904) which discloses a registration accuracy measurement mark.

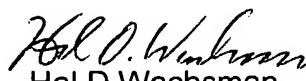
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D. Wachsman whose telephone number is 571-272-2225. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the  
Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Hal D Wachsman  
Primary Examiner  
Art Unit 2857

HW  
October 29, 2005